REMARKS

The Office Action dated October 12, 2005 has been received and carefully noted. In view of the Response filed to a Restriction Requirement filed on September 6, 2005, claims 2, 4, 7-11, 13, 15, and 16 are withdrawn.

The following remarks are submitted as a full and complete response thereto.

Claims 1, 3, 5, 6, 12, 14 are pending and under consideration.

REJECTION UNDER 35 U.S.C. § 102:

In the Office Action, at page 2, claims 1, 3, 5, 6, 12 and 14 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 6,699,152 to Tanaka ("Tanaka"). The Office Action took the position that Tanaka describes all the recitations of independent claims 1, 12, and 23 and related dependent claims. This rejection is traversed and reconsideration is requested.

Independent claim 1, upon which claims 3, 5, 6, 12 and 14 are dependent, recites an oscillating inner gearing planetary gear system including an internal gear, an external gear which meshes with the internal gear, an eccentric body which oscillatingly rotates either the internal gear or the external gear, an input shaft, and a middle shaft which has an orthogonal gear, the orthogonal gear linking the middle shaft to the input shaft at a right angle. Either the internal gear or external gear is oscillatingly rotated via the input shaft, the orthogonal gear, the middle shaft, and the eccentric body.

As will be discussed below, Tanaka fails to disclose or suggest the elements of any of the presently pending claims.

Tanaka generally describes a speed reduction gear assembly which facilitates the mounting of a motor while securing a hollow space in a portion of a rotation center. See column 1, lines 46-50. A reduction gear 10 and an eccentric member shaft 17 are provided. See column 2, lines 15-17 and 40-49. As the eccentric member shaft 17 rotates, the external gears 19 undergo oscillatory motion.

An input gear member 25 is fitted to a bearing housing 25a by press fitting. See column 3, lines 5-6. A hollow cylindrical intermediate gear 30 is provided in portion of the rotation center of the reduction gear 10 between the reduction gear 10 and a motor mounting member 24. See column 3, lines 29-34. Two gears, i.e., a large gear 30a and a small gear 30b, are provided as the intermediate gear 30, and the large gear 30a meshes with the aforementioned input gear 25b. See column 3, lines 35-39.

Applicant respectfully indicates that the reduction gear described in Tanaka corresponds to the design described in the Description of the Related Art, page 5, lines 1-7, of the present application. However, the specification of the present application describes that for a gear arrangement such as the one described in Tanaka, problems arise which involve the axial length becoming longer because it is necessary to insert an idler gear for offsetting the axis. See page 5, lines 7-10, of the Description of the Related Art of the present application. The Description of the Related Art of the present application indicates that even if a hollow shaft were to be adopted, it would mean forming a space

inside an input shaft rotating at high speed, and thus, for example, to locate wire harnesses, cooling water piping, etc. in the space, it would be necessary to install protective piping which would be held so as not to rotate. See page 5, lines 11-19, of the Description of the Related Art of the present application.

According to the Office Action, Tanaka describes "a middle shaft which has an orthogonal gear, the orthogonal gear linking the middle shaft to the input shaft at a right angle," as recited in independent claim 1. However, Tanaka limits its description to providing that the intermediate gear 30 includes the large gear 30a and the small gear 30b, where the large gear 30a meshes with the input gear 25b, in which the input gear member 25 is fitted to. The input gear 25b, the large gear 30a, the small gear 30b, and the transmission gear 33 are all parallel gears which are used for transmitting torque between two parallel shafts. Tanaka has no orthogonal gear which is used for transmitting torque between two shafts that lie at a right angle. FIG. 1 of Tanaka clearly shows that there is no middle shaft being linked at a right angle to an input shaft. Applicant respectfully indicates that "an orthogonal gear" is clearly recited in independent claim 1 as being a gear that is configured to be an orthogonal gear. Tanaka does not include a gear configured to be an orthogonal gear.

The present application sets forth many benefits associated with the structural elements of the gear system being recited in independent claim 1, especially the orthogonal gear. For instance, pages 6 and 7 of the present application provide that the input shaft of the gear system (or the output shaft of the driving source) can be located in

a right angle direction to the output shaft (member), through the orthogonal gear. Therefore, even when forming a through-hole in the center of a gear system, it is not necessary to make a hollow shaft through an input shaft, a driving source, etc. A large-diameter hollow shaft may be easily formed. Particularly, because not only a driving source but also an input shaft (rotating at high speed) does not need to have a hollow structure, rotational speed of the inner wall of the space formed in the center of a gear system can be very slow, and it is unnecessary to locate separate "protective piping" (corresponding to a cylindrical shaft 34 in Tanaka) or other similar features. Therefore, more space can be made available at lower cost.

Further, according to the structure of the present invention, because a driving source itself does not exist on the side opposite to a partnered apparatus of a gear system, the axial length of an entire system including a driving source can be largely shortened. In this regard, the present invention is beneficial, when compared to constructions of the related art where a driving source is simply located at a right angle to an input shaft so that the axial length is shortened by the lengthwise and breadthwise dimensional difference of the driving source. Also, because there is little waste of occupied space when a driving source is integrated therewith, the volume taken up per single unit as stock or during transporting can be reduced.

Accordingly, in view of the foregoing, it is respectfully asserted that Tanaka fails to teach or suggest all the recitations of independent claim 1. It is respectfully requested that independent claim 1 and related dependent claims 3, 5, 6, 12, and 14 be allowed.

CONCLUSION:

In view of the above, Applicant respectfully submits that the claimed invention recites subject matter which is neither disclosed nor suggested in the cited prior art. Applicant further submits that the subject matter is more than sufficient to render the claimed invention unobvious to a person of skill in the art. Applicant therefore respectfully requests that each of claims 1, 3, 5, 6, 12, and 14 be found allowable and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the Applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the Applicant respectfully petitions for an appropriate extension of time.

Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

Alicia M. Choi
Registration No. 46,621

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY LLP
14TH Floor
8000 Towers Crescent Drive
Tysons Corner, Virginia 22182-2700
Telephone: 703-720-7800
Fax: 703-720-7802

AMC:jkm

Enclosures: Petition for Extension of Time
Check No. 14074